

PHYSICIANS AND ALLIED HEALTH MANPOWER

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IN the past decade much has been written about the shortage and maldistribution of physicians.¹ In an attempt to overcome these perceived shortages, many have proposed that physician extenders and other allied health workers can play an important role in meeting the increased demand for medical services.²⁻⁴ It has been suggested that through proper utilization and effective training these workers can make a substantial contribution to alleviating current problems.⁵⁻⁷

One of the difficulties encountered in any attempt to assess the role of paramedical workers in our present system of health delivery is the shortage of empirical information germane to the allied health field. This problem is particularly acute in regard to the perceptions and experiences of physicians in dealing with allied health workers. As the effectiveness of most allied health workers is directly related to the recognition provided by physicians, there is a need for information regarding physicians' attitudes toward them. The shortage of empirical data in this area prompted us to undertake this study.

Our objective was to examine the attitudes and perceptions of practicing physicians in regard to selected categories of allied health workers. Particular attention was directed at an examination of: 1) demographic characteristics of physicians who employ allied health workers, 2) patterns of utilization of allied health workers, and 3)

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TABLE I. EMPLOYMENT OF VARIOUS CATEGORIES OF ALLIED HEALTH WORKERS*

<i>Category of worker</i>	<i>Total number employed</i>	<i>Workers per physician</i>
Medical secretary	205	0.67
Registered nurse	165	0.54
Licensed practical nurse	55	0.18
Medical assistant	50	0.16
Medical laboratory technician	40	0.13
Nurse's aide	32	0.10
Certified laboratory assistant	29	0.09
All others	123	0.40
Total	699	2.27

*Includes only the 308 physicians who indicated such employment on the first questionnaire.

physicians' attitudes toward aspects of allied health training. It was hoped that this information would be useful in assessing the role that physician extenders as well as other allied health workers can play in meeting the needs of our ever-changing system of health care.

METHODOLOGY

This empirical study employed survey questionnaires mailed to a systematic random sample of 1,008 members of the Pennsylvania Medical Society (8.5% of the state-wide total of 12,156 physicians) drawn from the society directory. While the Pennsylvania Medical Society does not include all physicians in the state, it was felt that relatively few physicians who have substantial contact with allied health workers are not members of the society.

Four hundred eighty-four physicians responded to this initial mailing. A follow-up questionnaire was sent to those physicians who did not respond to the initial questionnaire in order to verify the validity of the sample and to increase the rate of response to certain questions. The follow-up contained only a subset of the questions from the initial questionnaire. In addition, several internal checks of validity were incorporated into the initial questionnaire.

Two hundred fifty-three physicians completed the follow-up questionnaire. It was found that for each question on the follow-up the

TABLE II. PATTERNS OF UTILIZATION OF ALLIED HEALTH WORKERS*

<i>Task</i>	<i>Physician exclusively</i>	<i>Allied health worker exclusively</i>	<i>Either</i>	<i>Neither</i>	<i>Did not reply</i>
Scheduling and receiving patients	4	248	37	14	5
Taking histories and chief complaints	189	25	83	4	7
Performing physical examination	275	1	13	10	9
Maintaining patients' medical charts	103	77	117	3	8
Accounting, bookkeeping, billing	3	246	27	29	3
Purchasing supplies and equipment	15	173	99	17	4
Preparing medical and business correspondence	59	104	130	11	4
Completing insurance forms, accident reports, etc.	23	170	96	17	2
Conducting routine tests, e.g., blood counts, urinalysis, EKG	26	143	64	54	21
Removing sutures, changing dressings, giving injections, drawing blood	121	39	111	18	19

*Includes only the 308 physicians who indicated such utilization on the first questionnaire.

distribution of responses was not significantly different (at $\alpha = 0.05$) from responses to the same question on the initial questionnaire. Less than a third (29.7%) of all responding physicians indicated that they were general practitioners; this does not differ significantly ($\alpha = 0.01$) from the percentage of general practitioners among all society members.

When adjusted for 37 questionnaires that were not delivered because the addressee was unknown, deceased, or had moved, the combined rate of response for the two-stage sample was 75.9%. Thirteen questionnaires were deleted from the analysis during the process of compilation.

Since the sample of physicians encompasses only Pennsylvania, we suggest that a generalization of our conclusions to larger geographic entities should be made cautiously.

TABLE III. PHYSICIANS' ATTITUDES CONCERNING THE EMPHASIS OF ALLIED HEALTH TRAINING

<i>Statement</i>	<i>Agree strongly</i>	<i>Agree moderately</i>	<i>Disagree moderately</i>	<i>Disagree strongly</i>	<i>Did not reply</i>
All allied health graduates should receive an associate of arts or science (A.A. or A.S.) degree	39	136	77	40	16
A hospital is the only place in which an allied health worker can be trained	31	66	108	96	7

FINDINGS

Demographics. Of all respondents, 207 (28.6%) indicated that they were general practitioners, while 475 (65.6%) categorized themselves as specialists and 42 (5.8%) stated that they were not practitioners. Of the 724 physicians who responded, 266 (36.7%) indicated that they did not personally employ or direct any allied health personnel.

Of 471 physicians responding to the initial questionnaire, 340 (72.2%) maintained a private office, while 67 (14.2%) maintained an office in a hospital. Nineteen (4.0%) of the respondents did not categorize their office settings. The remainder were employed in hospital outpatient departments, in hospital laboratories, or in laboratories not based in hospitals. Two hundred fifty-two (53.6%) of 470 physicians responding to the initial questionnaire were in solo practice, 124 (26.3%) were in a single-specialty group practice, 32 (6.8%) were in a multiple-specialty group practice, and 40 (8.5%) were involved in other practice structures. Twenty-two (4.9%) of the respondents did not characterize the organizational patterns of their practices.

The analyses which follow are restricted to those 458 respondents (63.3%), 308 on the original questionnaire and 150 on the follow-up questionnaire, who indicated that they do personally employ or direct allied health workers.⁸ For each question, percentages are based on the total number of physicians who responded to that question.

Physicians indicated that they employed or directed allied health workers in several categories as summarized in Table I, which shows that the average physician who employs or directs health workers employs 2.27 allied health workers.

Utilization of allied health workers. To learn about patterns of utilization of allied health workers, physicians were asked to designate, for each of 10 tasks, whether they are performed in their office by a doctor exclusively, by an allied health worker exclusively, by either a doctor or an allied health worker, or by neither doctor nor allied health worker (see Table II). In interpreting the "neither" and "did not answer" columns in Table II it should be noted that the 308 physicians who personally directed allied health workers include nonpractitioners as well as practitioners, and that some of the tasks on the list are not pertinent to all types of practice.

Attitudes concerning allied health training. Physicians indicated their preferences regarding the emphasis in allied health training (see Table III). Significantly more than half of the physicians who responded, 59.9%, agreed that allied health graduates should receive associate degrees.

Physicians indicated their experiences concerning the training of newly hired allied health workers. Of the 446 physicians who responded,⁹ 121 (27.1%) indicated that a typical new employee needs extensive training; 283 (63.5%) said that a typical new employee needs some training; and 42 (9.4%) said that a typical new employee needs little or no training to perform in their office settings.

Physicians were also queried regarding alternative approaches to meet existing needs for allied health manpower. Assuming a uniform length of training, 174 (39.1%) of 445 physicians responding⁹ preferred "allied health training programs geared only to producing assistants for given specialties, e.g., laboratory technician, x-ray technician, etc.," while 271 (60.9%) preferred "allied health training programs geared to producing generalists who could perform in a variety of roles, e.g., perform secretarial, laboratory, and nursing tasks." Significantly more than half the physicians surveyed preferred the flexibility of the second option. Also, the more flexible option was preferred by a significantly higher percentage of physicians in general practice than physicians in specialty practice.

DISCUSSION

Approximately two thirds of all physicians who responded to the questionnaire noted that they personally employed or directed at least one allied health worker. This indicates that the use of allied health

personnel by practicing physicians is rather widespread. Of prime interest is the manner in which physicians utilized these workers in their practices. In large measure, those physicians who responded indicated that they rely on allied health workers to fill nonmedical roles, that is, the major responsibilities of paramedical workers included scheduling and receiving patients; accounting, bookkeeping, and billing of patients; purchasing supplies and equipment; preparing medical and business correspondence; and completing insurance forms and accident reports. The only medical area in which allied health workers seem to have primary responsibility is in conducting routine tests such as blood counts, urinalysis, and electrocardiograms.

In the areas of taking histories and performing physical examinations, the role of the physician is dominant. Of the physicians responding, 62.8% (189) indicated that they exclusively take histories of patients, while 92.0% (275 physicians) noted that they exclusively perform physical examinations. In the maintenance of patients' medical records, 34.3% (103 physicians) noted that they exclusively performed this function, while 25.7% (77 physicians) indicated that they delegated this role exclusively to their allied health employees. In regard to removing sutures, changing dressings, giving injections, and drawing blood, 121 (41.8%) of the physicians responding noted that they perform this function exclusively, while 39 (13.5%) delegate this role exclusively to their allied health employees.

The implications of these findings to the role of physicians' assistants are many. There is widespread agreement that extenders can increase the productivity of physicians by performing many of the tasks now conducted by physicians. An underlying assumption, however, is that physicians will be willing to delegate to these extenders many of their medical as well as business roles. The findings of this study do not indicate that this is presently the case. For the most part physicians in private practice view their paramedical workers in terms of nonmedical roles.

The extent to which this takes place can be pointed out by examining the amount of additional training that new allied health employees need in order to work in offices. Of physicians responding, 27.1% (121 physicians) indicated that new employees need some training, while 9.4% (42 physicians) said that a typical new employee needs little or no training to perform in these offices. Although each of these allied

health workers had undergone specific training, most physicians felt that it was necessary to orient these workers to their individual modes of practice. This is clearly indicated by the fact that a majority of physicians responding, 60.9% (271 physicians), would prefer to see allied health workers trained as generalists as opposed to the present pattern of producing assistants for given specialties.

CONCLUSIONS

In this paper an attempt has been made to gain perspective on physician's perceptions regarding the utilization and training of allied health workers. The findings indicate that practicing physicians view the role that paramedical workers can presently play in increasing the productivity of physicians is rather limited. For the most part physicians in private practice seem to be most willing to delegate nonmedical functions to auxiliary allied health personnel. However, they seem less willing to permit these workers to undertake tasks which physicians consider medical in nature.

This finding is significant when viewed in the context of physician extenders. Although much discussion has centered on the important role that physician assistants can play in increasing the productivity of the physician, results indicate that a majority of respondents do not seem willing to delegate to auxiliary personnel tasks which they consider to be within their purview. It seems that a concerted effort will have to be made to reorient the thinking of physicians if allied health workers are to play what is considered to be an important role in meeting the increased demand for medical services.

NOTES AND REFERENCES

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8. Unless otherwise indicated, information is derived from the initial questionnaire.
9. This information was obtained from the follow-up as well as the initial questionnaire.